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U.S. Patent Application Serial No. 09/674,546
For: NEISSERIA MENINGITIDIS ANTIGENS
AND COMPOSITIONS
By: Claire M. FRASER et al.
Our Reference: 22300-2101200

Attached is the following:

1. Transmittal (1 Page)
2. Information Disclosure Statement (3 pages)
3. PTO/SB/08a/b (3 pages)

sf-2189311

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PTO/SB/21 (09-04)

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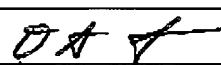
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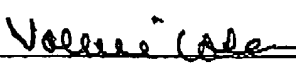
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TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>	Application Number	09/874,546	
	Filing Date	April 30, 1999	
	First Named Inventor	Claire M. FRASER	
	Art Unit	1645	
	Examiner Name	S. Devi	
Total Number of Pages in This Submission	7	Attorney Docket Number	223002101200

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Signature			
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Date	September 25, 2006	Reg. No.	48,751

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sf-2199049

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Patent

Docket No. 223002101200

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as First Class Mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: September 25, 2006

Signature:

(Valerie Cohen)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Claire M. FRASER et al.

Examiner: S. Devi

Serial No.: 09/674,546

Group Art Unit: 1645

Filing Date: April 30, 1999

For: NEISSERIA MENINGITIDIS
ANTIGENS AND COMPOSITIONS

INFORMATION DISCLOSURE
STATEMENT UNDER 37 C.F.R. § 1.97 & 1.98

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, Applicants submit for consideration in the above-identified application the documents listed on the attached Form PTO/SB/08a/b. The documents listed on the attached Form PTO/SB/08a/b were cited in the International Search Report mailed on June 15, 2000, directed to corresponding international application number PCT/US99/09346, filed April 30, 1999. According to Form PCT/SO/EO/916 (371 Formalities Notice) issued for the present application June 27, 2003, copies of the references cited in the International Search Report have been submitted to the USPTO. Therefore, copies are not included herewith. The Examiner is requested to make these documents of record in the application.

sf-2180253

Application No. 09/674,546

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Docket No. 223002101200

This Information Disclosure Statement is submitted:

- ☐ With the application; accordingly, no fee or separate requirements are required.
- ☐ Before the mailing of a first Office Action after the filing of a Request for Continued Examination under § 1.114. However, if applicable, a certification under 37 C.F.R. § 1.97 (e)(1) has been provided.
- ☒ Within three months of the application filing date or before mailing of a first Office Action on the merits; accordingly, no fee or separate requirements are required. However, if applicable, a certification under 37 C.F.R. § 1.97 (e)(1) has been provided.
- ☐ After receipt of a first Office Action on the merits but before mailing of a final Office Action or Notice of Allowance.
- ☐ A fee is required. A check in the amount of ___ is enclosed.
- ☐ A fee is required. Accordingly, a Fee Transmittal form (PTO/SB/17) is attached to this submission in duplicate.
- ☐ A Certification under 37 C.F.R. § 1.97(e) is provided above; accordingly, no fee is believed to be due.
- ☐ After mailing of a final Office Action or Notice of Allowance, but before payment of the issue fee.
- ☐ A Certification under 37 C.F.R. § 1.97(e) is provided above and a check in the amount of ___ is enclosed.
- ☐ A Certification under 37 C.F.R. § 1.97(e) is provided above and a Fee Transmittal form (PTO/SB/17 is attached to this submission in duplicate.)

Applicants would appreciate the Examiner initialing and returning the Form PTO/SB/08a/b, indicating that the information has been considered and made of record herein.

sf-2180253

Application No. 09/674,546

3

Docket No. 223002101200

The information contained in this Information Disclosure Statement under 37 C.F.R. § 1.97 and § 1.98 is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

In the unlikely event that the transmittal form is separated from this document and the Patent and Trademark Office determines that an extension and/or other relief (such as payment of a fee under 37 C.F.R. § 1.17 (p)) is required, Applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petition and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing 223002101200.

Dated: September 25, 2006

Respectfully submitted,

By OTL
Otis Littlefield
Registration No.: 48,751
MORRISON & FOERSTER LLP
425 Market Street
San Francisco, California 94105-2482
(415) 268-6846

sf-2180253

ALTERNATIVE TO PTO/SB/08a/b (07-05)

Substitute for form 1448/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)			Complete if Known		
			Application Number	09/674,546	
			Filing Date	April 30, 1999	
			First Named Inventor	Claire M. FRASER	
			Art Unit	1645	
			Examiner Name	S. Devi	
Sheet	1	of	3	Attorney Docket Number	223002101200

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U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number/Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ² -Number ³ -Kind Code ⁴ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁵
	1.	EP-0 818 465	01-14-1998			
	2.	WO-92/13871	08-20-1992			
	3.	WO-94/08013	04-14-1994			
	4.	WO-96/01901	01-25-1996			
	5.	WO-96/29412	09-26-1996			
	6.	WO-96/33276	10-24-1996			
	7.	WO-97/13860	04-17-1997			
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	9.	BAEUMLER, A. J. et al. (1993). "Hypothetical 29.6 kD Protein in PCP 5' Region (ORF1)," Database Swissprot AC P31485			
	10.	BAUMLER, A. J. and K. Hantke (1992). "A Lipoprotein of Yersinia Enterocolitica Facilitates Ferrioxamine Uptake in Escherichia Coli," Journal of Bacteriology 174(3): 1029-1035.			
	11.	BLAKE, M. S. and L. M. Wetzler. (1995). "Vaccines for Gonorrhoea: Where are We on the Curve?" Trends in Microbiology 3(12): 469-474.			
	12.	BURLAND, V. et al. (1994). "Escherichia Coli K-12 Chromosomal Region From 92.8 to 00.1 Minutes," Database Empro1 AC U14003.			
	13.	CONLIN, C. A. et al. (1992). "Escherichia Coli prfC Encodes an Endopeptidase and is Homologous to the Salmonella Typhimurium opdA Gene," Journal of Bacteriology 174(18): 5881-5997.			
	14.	DILLARD, J. P. et al. (1997) "A Peptidoglycan Hydrolase Similar to Bacteriophage Endolysins Acts as an Autolysin in Neisseria Gonorrhoeae," Molecular Microbiology 25(5): 893-907.			

Examiner Signature		Date Considered	
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sf-2180248

ALTERNATIVE TO PTO/88/08a/b (07-05)

Substitute for form 1449/PTO		Complete if Known	
		Application Number	09/874,546
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Filing Date	April 30, 1999
		First Named Inventor	Claire M. FRASER
		Art Unit	1645
		Examiner Name	S. Devi
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15.	FLEISCHMANN, R. D. et al. (1995). "Hypothetical Protein HI0753," Database Swissprot AC P44861.
16.	FLEISCHMANN, R. D. et al. (1995). "Oligopeptidase A (EC 3.4.24.70)," Database Swissprot AC P44573.
17.	HACKER, J. et al. (1993). "Immunophilins: structure-function relationship and possible role in microbial pathogenicity," Molecular Microbiology 10(3): 445-456.
18.	HUANG, M. et al. (1995). "A Stomatin-Like Protein Necessary for Mechanosensation in <i>C. Elegans</i> ," Nature 378(6554): 292-295.
19.	KANEKO, T. (1996). "Membrane-Bound Lytic Transglycosylase A MltA <i>Synechocystis</i> sp. Strain PCC 6803," Database TrEMBL AC Q55666.
20.	LOMMATZSCH, J. et al. (1997). "Outer Membrane Localization of Murein Hydrolases: MltA, A Third Lipoprotein Lytic Transglycosynase in <i>Escherichia Coli</i> ," Journal of Bacteriology 179(17): 5465-5470.
21.	MCALLISTER, C. F. and D. S. Stephens. (1993). "Analysis in <i>Neisseria meningitidis</i> and other <i>Neisseria</i> species of genes homologous to the FKBP immunophilin family," Molecular Microbiology 10(1): 13-23.
22.	MCALLISTER, C. F. et al. (1993). "Neisseria Elongata NRL FKBP Immunophilin Homolog Gene," Database Empro2 AC U001198.
23.	POOLMAN, J. T. (1995). "Development of a Meningococcal Vaccine," Infectious Agents and Disease 4(1): 13-28.
24.	QUENTIN-MILLET, M. J. et al. (1998). "N. Meningitidis HTR Tbp2 (de13777-385, de1407-465, de 1488-508)," Database GCG_GenesEQ AC W14640.
25.	ROKBI et al. (1998). "Transferrin Binding Protein B, TbpB, <i>Neisseria Meningitidis</i> ," Database TrEMBL AC 069750.
26.	ROKBI, B. et al. (1997). "Evaluation of Recombinant Transferrin-Binding Protein B Variants from <i>Neisseria Meningitidis</i> for their Ability to Induce Cross-Reactive and Bactericidal Antibodies Against a Genetically Diverse Collection of Serogroup B Strains," Infection and Immunity 65(1): 55-63.
27.	ROKBI, B. et al. (1997). "Heterogeneity of <i>tbpB</i> , the transferrin-binding protein B gene, among serogroup B <i>Neisseria meningitidis</i> strains of the ET-5 complex," Clinical and Diagnostic Laboratory Immunology 4(5): 522-529.
28.	SAMPSON, B. and E. C. Gotschlich. (1992). "Neisseria meningitidis encodes an FK506-inhibitable rotamase," Proc. Natl. Acad. Sci. USA 89(4): 1164-1168.

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		Application Number	09/674,548		
		Filing Date	April 30, 1999		
		First Named Inventor	Claire M. FRASER		
		Art Unit	1845		
		Examiner Name	S. Devi		
Sheet	3	of	3	Attorney Docket Number	223002101200

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29.	WONG, C. Y. et al. (1997). "Cloning and characterization of two immunophilin-like genes, ilpA and fkpA, on a single 3.9-kilobase fragment of Aeromonas hydrophila genomic DNA," Journal of Bacteriology 179(11): 3397-3403.	
30.	YOU, Z. et al. (1997). "Rhizobium Etli Stomatin like Protein (slp) gene, complete cds.," Database Empro1 AC AF034831.	
31.	YOU, Z. et al. (1998). "A Stomatin-Like Protein Encoded by the slp Gene of Rhizobium Etli is Required for Nodulation Competitiveness on the Common Bean," Microbiology 144(9): 2619-2627.	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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